

## Determination of the Rate of Methicillin Resistant and Enterotoxigenic *Staphylococcus Aureus* in Different Kinds of Creamy Pastries Sold in Pastry Shops in Urmia

Hossein Jazani\*; Minoo Zartoshti

Department of Microbiology, Immunology and Genetics, Faculty of Medicine, Urmia Medical Sciences University, Urmia, Iran

n\_jazani@yahoo.com

**Background & Objectives:** *Staphylococcus aureus* is a one of the most frequent causes of food poisoning all over the world. Staphylococcal food poisoning is caused by enterotoxins produced by this bacterium during its growth in contaminated foods. Many of *Staphylococcus aureus* strains are methicillin resistant; these strains usually show high resistances to different classes of antibiotics and can cause serious problems in treatment, this study was focused on detection of the presence of enterotoxigenic *S.aureus* and determining the rate of resistance to methicillin among the isolates obtained from creamy pastries in Urmia, Northwest of Iran.

**Methods:** 100 samples of creamy pastries were collected under sterile conditions via standard methods and were transported to the laboratory. The samples were cultured and identified by routine bacteriological methods as *S.aureus* isolates. The isolated bacteria were evaluated by SET-RPLA KIT TOXIN DETECTION KIT in order to detection of enterotoxigenic isolates. The sensitivity of the isolates to methicillin was determined by oxacillin disc with disc diffusion methods.

**Results:** The results indicated that 15% of the creamy pastries were contaminated by *S. aureus*, also there is no Significant relationship between the rate of contamination and the kind of pastry ( $p>0.05$ ). All the isolates were sensitive to oxacillin. 40% of the *S. aureus* isolates were enterotoxigenic, which 66.6%, 33.3% and 16.6% produced enterotoxin A, B and D respectively, the isolates showed a high sensitivity to penicillin, rifampin and teicoplanin, also there was no difference between enterotoxigenic and non enterotoxigenic isolates in respect of the sensitivity to antibiotics.

**Conclusion:** some creamy pastries in Urmia, Northwest of Iran are contaminated by enterotoxigenic *S.aureus*, but methicillin resistant isolates is not spread in creamy pastries in Urmia

**Keywords:** *Staphylococcus aureus*; Enterotoxin; Creamy Pastries